

STREETLIGHT SPECIFICATIONS

Section 1: New Category 1, 2, 3, & 4 Street Light Installation

Street Light		Streets
Category	Type	
1	Six-sided Utility Arlington double head fixture with Cincinnati cross arms and Charleston Pole; fitted with Waterproof Receptable	Redwood Road, South Jordan Parkway (10400 S & 10600 S); 11400 South; and Jordan Gateway.
2	Six-sided Utility Arlington single fixture with Charleston Pole	1300 West; 2700 West; 4000 West; 4800 West; 9800 South; and River Heights Drive.
3	Utility Granville with trim tabs and North Yorkshire Pole	1000 West; 2200 West; 3200 West; 3600 West; and 10200 South; and Riverfront Parkway (south of 11400 S).
4	Utility Post Top with Wadsworth Pole	Residential Streets. Residential developments at the developer's expense may upgrade streetlight fixtures to Category 3 type. All fixtures within the development shall be the same type.

**** NOTE:** All streetlight wiring shall be suitable for wet conditions placed within PVC conduit.

**** NOTE:** The following specifications apply to both SINGLE POLE and MULTIPLE POLE INSTALLATION (Daisy Chain, etc.). In addition, the MULTIPLE POLE INSTALLATION shall comply with those items identified specifically below in these specifications.

VOLTAGE:

- 1) All street lights shall have 120 volt input Voltage (nominal).

WIRE / CONDUCTORS:

- 1) Wire size shall be designed by an electrical engineer with no more than a 3% drop in the nominal voltage at the base of each pole. The minimum wire size shall be #6 AWG THHN copper lines from power source to the base of pole.
- 2) Category #1, #2, and #3 lights shall have the wire sized for an additional 3-AMP's per light pole and shall be included in the design.
- 3) From pole base or (hand hole) to the fixture head #10 or #12 THHN copper will be allowed.
- 4) No aluminum wire allowed.
- 5) Wire to be black, white, green or phased taped at both ends.
- 6) Run conduit to the lock side of transformer. Leave 8 feet excess wire to transformer or 6 feet excess wire to secondary box as per Rocky Mountain Power (RMP) requirements, so that (RMP) will make the connection.

Multiple Pole Installation:

- 1) Wire size shall be designed by an electrical engineer with no more than a 3% of a drop in the nominal voltage at the base of each pole. The minimum wire size shall be a #6 copper wire suitable for wet conditions.

CONDUIT:

- 1) All conduits shall be a minimum of 1-1/2 inch PVC, Schedule 40 and grey in color.
- 2) 90° sweeps/bends shall have a maximum of 24 inch radius and a minimum of 18 inch radius.
- 3) Conduit shall have a minimum of 24 inches of cover in a utility trench and a maximum of 30 inches of cover (refer to details - diagram sheet). (*)
- 4) All conduits shall have an approved cap or duct seal on ends to prevent debris from entering conduit.
- 5) All conduits shall have pull string.

- 6) Conduit shall extend a maximum of 3 inches and a minimum of 1 inch above the finished streetlight concrete base.

Multiple Pole Installation:

- 1) Conduits will be allowed to be of a larger size as required to accommodate the larger wire sizes.
- (*) *Need to have copy of utility trenching drawing.*

GROUND BOX:

- 1) Known as box, vault, flush mount, pull box, enclosure, and junction box.
- 2) All plastic boxes shall be grey in color with the words "South Jordan City Electric". See **detail sheet** for drawing of plastic box lid.
- 3) Lid must be secured with the proper stainless steel bolts.
- 4) 6" of gravel (3/4 minus) shall be placed prior to setting the ground box.
- 5) Top of ground box shall be placed at finished grade.
- 6) Conduit shall extend a maximum of 3 inches above the gravel in the base of the ground box and a minimum of 2 inches above gravel in the base of ground box.
- 7) One ground box shall be installed within 4 feet of the power source (as per Rocky Mountain Power specifications).
- 8) One ground box shall be installed within 2 feet of street light pole base. This item may be modified or deleted as determined by the Engineering Inspector in the field during construction, with input from the City Streets Superintendent.
- 9) Wire must extend 18 inches above grade to splice in ground box.

CONNECTIONS:

- 1) Wire nuts shall meet the specifications of a "Wet Location Installation" with silicone inside and will be allowed in the pole base only.
- 2) Mechanical lugs and/or splices must be used with heat shrink in the ground box and shall meet NEC specifications, be UL labeled & listed and be designed for this purpose.
- 3) A ferraz shawmut (or equivalent) with weatherproof rubber boots 600 volt, 30 AMP rated shall be used.
- 4) Fuse shall be 10 AMP time delay F.N.Q.
- 5) Fuse holder shall be placed on all hot leads.
- 6) Fuse holder shall be installed only in pole bases.

GROUNDING:

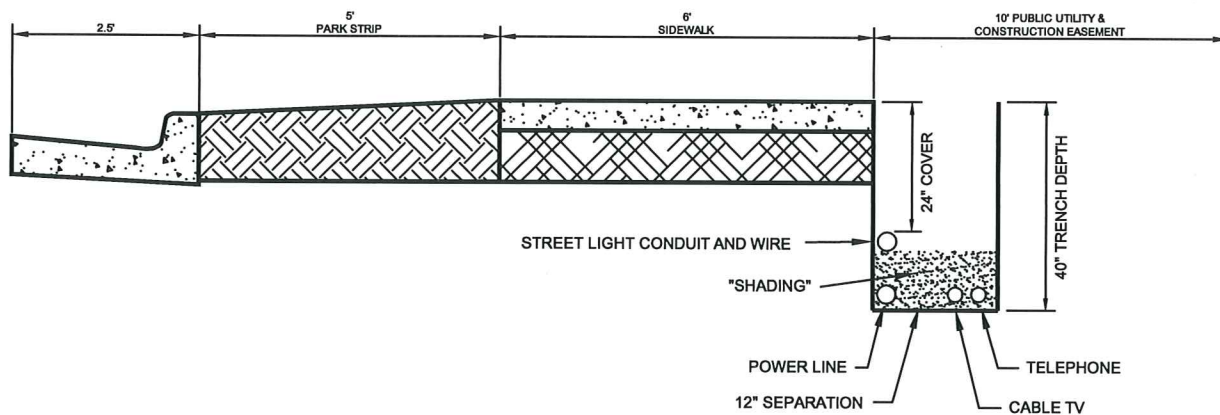
All grounding shall be installed according to the current Edition of the NEC Section 250 and UL labeled and listed.

- 1) Conductor
 - A) Solid, cu, bare, soft drawn.
- 2) Ground Rod or Ground Ring
 - A) Ground Rod - 8 feet x 5/8 inch diameter Copper weld/bonded, cu.
 - B) Ground Ring - #6 AWG copper clad per NEC Section 250

At anytime the City may require third party testing at the expense of contractor in addition to any costs to remedy deficiency.

- 3) Clamp
 - A) 5/8 inch cu clad.
- 4) Burndy KA25U 14 – 1/0 AWG AL/CU mechanical lugs or equivalent shall be used to connect the ground wire to the group clip inside the street light pole.

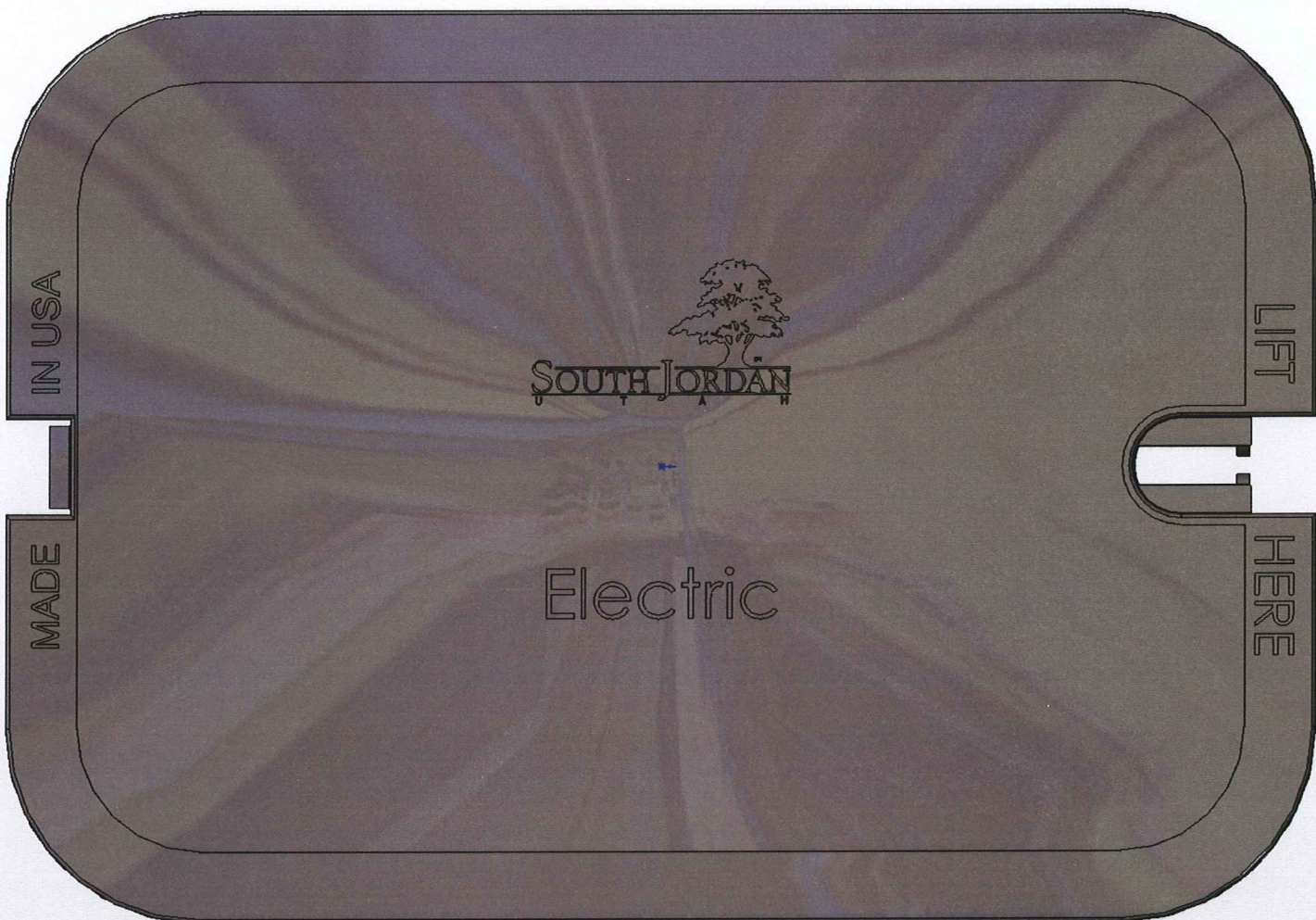
- 5) Ground rod shall be a minimum of 2 inches above finished concrete grade for the street light base and a maximum of 3 inches above finished concrete grade for street light bases. See detail sheet.



UTILITY TRENCH DETAIL

Not to Scale

Sheet No. 	Project No. _____	Standard Utility Trench Detail	 <small>SOUTH JORDAN</small> <small>1000 W. Towne Center Drive / South Jordan, UT 84095</small> <small>Telephone: (801) 254-3742 / Fax: (801) 254-5235</small>	NO.	DATE	REVISION COMMENTS
	Drawn by: <u>SG</u> Design by: _____					
	File Name: <u>Utility Trench Detail</u>					
	Checked by: _____ Date: <u>3/02/07</u>					



IN USA

MADE

LIFT

HERE

FOOTING TO BE CENTERED
IN PARKSTRIP
(4) ANCHOR BOLTS
3"x21"

CU GROUND WIRE

CONDUIT TO U.P.&L.
BOX OR TRANSFORMER

(5) HODPS
#3 REBAR

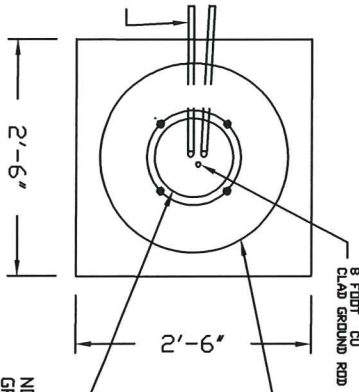
8 FOOT 5" CU
CLAD GROUND ROD

(5) VERTICAL
#4 REBAR

NOTE:
IN-LINE WATERTIGHT FUSEHOLDERS
REQUIRED AT CONNECTION POINT IN BASE
OF LIGHT LITTLEUSE #WPBI OR EQUAL.

LIGHT PEDESTAL DETAIL

PLASTIC CONDUITS
1" DIAMETER MIN.



PLAN VIEW

NOTE:
GROUND ROD AND PLASTIC
CONDUITS MUST BE LOCATED
WITHIN A 3" RADIUS FROM THE
CENTER OF BOLT CIRCLE.

1. ALL LIGHTS SHALL BE 120 V.
2. WIRE NUT, 10-12, BLUE, WET LOCATION TYPE WITH SILICONE INSIDE
3. GROUND CONNECTOR
4. CONDUCTOR, 8x5/8" SOLID, CU, BARE, SOFT DRAWN
5. IN-LINE FUSE HOLDER, URD, INSULATED ENDS
6. FUSE, 10A, 600 V, KTK, FNM, OR EQUIVALENT
7. JUNCTION BOX, UNDERGROUND, STREET LIGHT, SMALL PLASTIC, FOR NO OR LOW TRAFFIC AREA
8. BOX SHOULD BE PLACED AT GRADE LEVEL, AS CLOSE TO BASE AS POSSIBLE
9. JUNCTION BOX, UNDERGROUND, POLYMER CONCRETE COVER OR CONCRETE BOX WITH STEEL COVER, TO BE USED IN HIGH TRAFFIC AREAS
10. BOX SHOULD BE PLACED AT GRADE LEVEL, AS CLOSE TO BASE OR POLE AS POSSIBLE NOT IN SIDEWALK OR CURB
11. CONCRETE BOX WITH STEEL COVER TO BE USED FOR ROADWAY OR VERY HIGH TRAFFIC AREAS
12. CLAMP, GROUND ROD, 5/8" CU CLAD GROUND
13. ROD, GROUND 5/8" X 8', COPPER WELDBONDED CU
14. MOW STRIP, MADE OF CONCRETE, TUBE FORM, TYPICALLY 2'-4" WIDER THAN BASE OF POLE, FILLED WITH READY MIX CONCRETE AND LEVELLED TO BASE OF POLE, 8" DEEP WITH #4 REBAR RING IN MIDDLE OF DEPTH
15. MOW STRIP AROUND LIGHT POLES IS TO PROTECT AGAINST DAMAGE FROM EDGE TRIMMERS, LEVEL TO TOP BACK OF CURB
16. HELIX FOUNDATION LIGHT POLES SHALL NOT BE PERMITTED IN SOUTH JORDAN CITY FOR THE POLES
17. ALL CONTRACTORS INSTALLING LIGHT POLES IN SOUTH JORDAN CITY SHALL BE RESPONSIBLE FOR COORDINATION WITH UTAH POWER AND SOUTH JORDAN CITY WITH IDENTIFICATION, PROOF OF COMPLETION WILL BE REQUIRED BEFORE POLES WILL BE SIGNED OFF
18. UNDERGROUND WIRING FOR STREET LIGHTING SHALL BE INSTALLED AS PER NEC, BURIED AT A MINIMUM DEPTH OF 18" WHEN INSTALLED WITH DIRECT BURIAL CABLE, FROM POWER SOURCE, DIRECT BURIAL CABLE SHALL BE INSTALLED PERPENDICULAR TO CURB AND THEN RUNNING PARALLEL WITH CURB TO STREETLIGHT, WITH PLACEMENT OF WIRE A MAXIMUM DISTANCE OF 8" FROM TBC.
19. TYPE OF UNDERGROUND CABLE FOR STREET LIGHTING SHALL ALSO BE NEC APPROVED COPPER #8 OR #6 LISTED FOR DIRECT BURIAL USE
20. THE WIRING FOR THE POLES SHALL BE INSTALLED WITH A BREAKAWAY FUSE AT THE BASE OF THE POLE TO PROTECT FROM POSSIBLE ELECTROCUTION IF POLE WERE TO FALL FOR ANY REASON, ON RUNS GREATER THAN 15' IN LENGTH, A JUNCTION BOX SHALL BE INSTALLED WITH A BREAKAWAY FUSE AS CLOSE AS POSSIBLE TO U.P.&L. POWER SOURCE
21. ALL WIRING RUNNING FROM POWER SOURCE TO LIGHT NEEDS TO BE PLACED WITHIN A RECORDED EASEMENT SO THE CITY CAN MAINTAIN THEM.

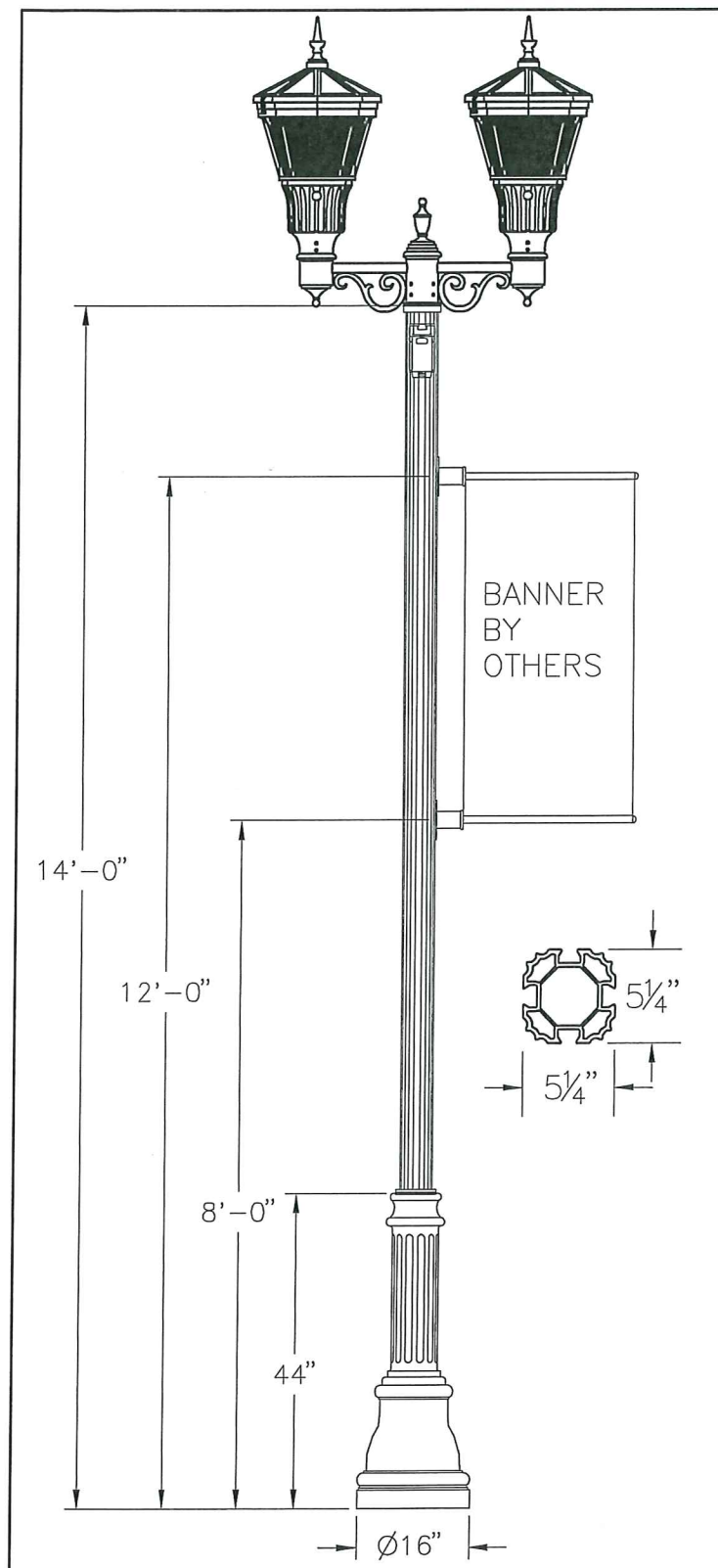
1. THREE WIRE COPPER CONDUCTOR (8-3/C TYPE TO 600 V NHTC SUN RES DIR BUR METHOD 4 CABLE OR EQUIVALENT) SHALL BE USED ON SINGLE POLE INSTALLATIONS (1-BLACK 2-WHITE 3-GREEN) - COPPER CABLE ONLY -
2. WIRE CONNECTIONS IN HAND HOLE SHALL BE MADE BURNDY YG812 ELECTRICAL CONNECTORS, HSTO 4-48-5 HEAT SHRINK OR EQUIVALENT SHALL BE USED TO COMPLETE WIRE CONNECTIONS.
3. BURNDY K425U 14-10 AWG AL/CU MECHANICAL LUGS OR EQUIVALENT SHALL BE USED TO CONNECT THE GROUND WIRE TO THE GROUND CLIP INSIDE THE HAND HOLE.
4. A GROUND SHAWWUT IN LINE FUSE HOLDER WITH/BOOT #6GB-11-11-B AND AMP 0TM15 GOLD FUSE OR EQUIVALENT SHALL BE INSTALLED INSIDE THE JUNCTION BOX OR TRANSFORMER CONNECTION TO THE HOTTER OF THE POWER CABLE SHALL BE CORRELATED BETWEEN CONTRACTOR AND U.P.&L.
5. STREET LIGHT POLE SHALL NOT BE INSTALLED IN A MANNER THAT WILL HINDER THE OPERATION OF FIRE HYDRANTS OR UNDERGROUND WATER SYSTEM ISOLATION VALVES.
6. INSTALLATIONS WITHIN CLOSE PROXIMITY TO TREES SHALL BE AVOIDED UNLESS APPROVED BY THE PROJECT MANAGER.
7. ALL WIRE WHICH IS INSTALLED UNDER SIDEWALK, DRIVEWAYS, OR OTHER PERMANENT STRUCTURES ARE REQUIRED TO BE PLACED IN CONDUIT.
8. POLE IS TO BE SET PLUMB, THE POLE SHALL BE INSTALLED WITHIN 1/4 DEGREE OF VERTICAL.

Streetlight Detail
Light Pedestal Detail
Category 1, 2, 3 & 4



Project No. _____
Drawn by: CR Design by: CR
File Name: _____
Checked by: _____ Date: _____

NO.	DATE	REVISION COMMENTS



Specifications

DESCRIPTION

The lighting post shall be aluminum construction consisting of a Ø5" shaft with a Ø3" x 4" tall tenon factory joined to a cast aluminum base and a shaft mounted duplex GFCI with a small while in use cover.

MATERIALS

The shaft shall be extruded aluminum. The base shall be cast aluminum, (heavy wall, 356.1 alloy) formed true to pattern with complete detail. All hardware shall be tamper resistant, stainless steel. Anchor bolts shall be hot-dip galvanized steel.

DIMENSIONS

The post shall be 14'-0" in height with a Ø5", .156" wall shaft with a Ø3" x 4" tall tenon. The base shall be Ø16" x 44" tall.

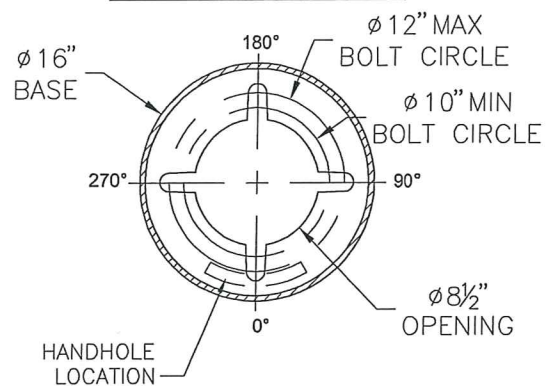
INSTALLATION

Post provided with (4)Ø¾" hot dip galvanized steel L-type anchor bolts. A door is located in the base to provide wiring and anchorage access.

FINISH

The post assembly shall be shipped with a black powder coat finish.

Anchorage Detail

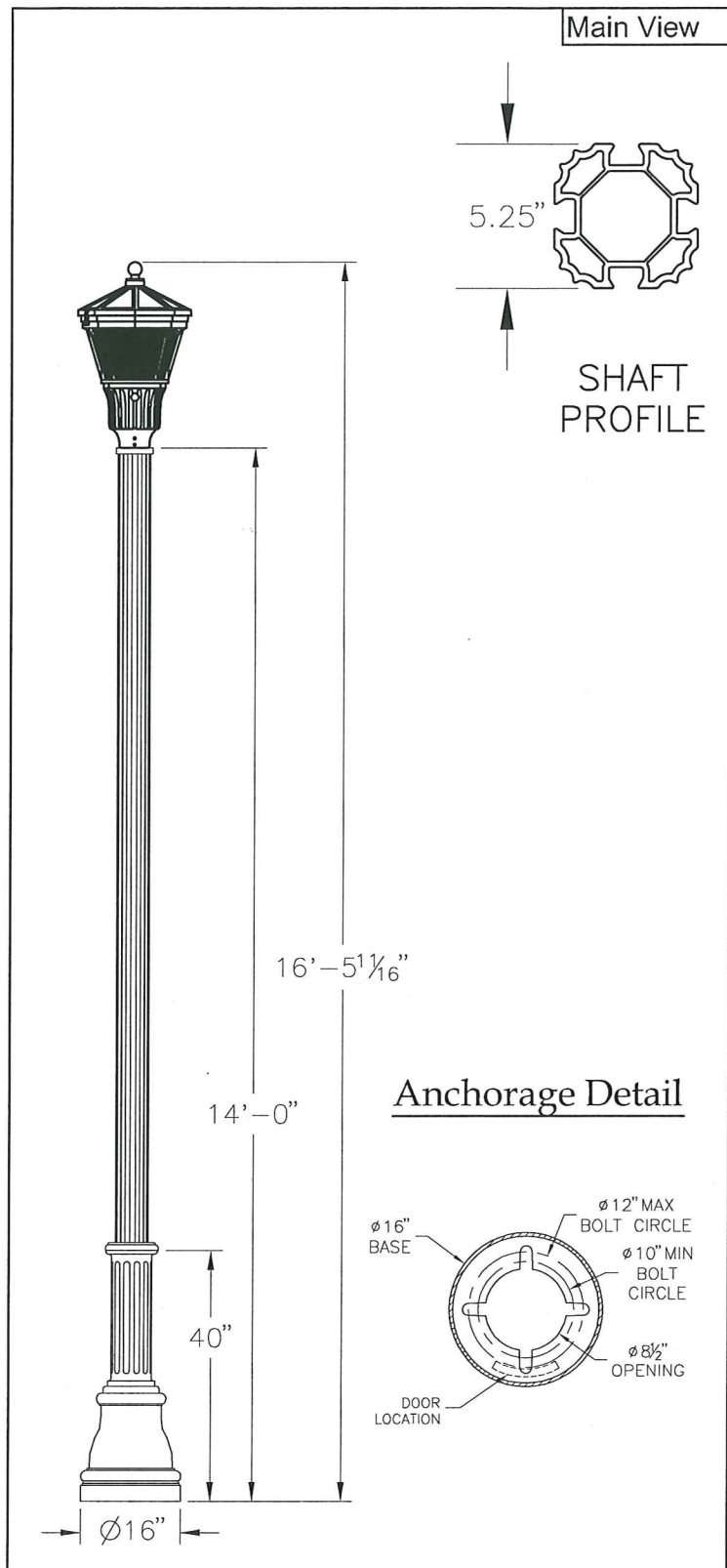


South Jordan Category 1

(STL-776)SL5CH161400D1-CSC30CABKH, FGIUS-SBKH
(2)SLBA24H1.00SL5D1, (2)ARU15AHPMABG3 H LEADS25FT10GA

ORDER #:	TYPE:	DRAWING #:
REVISION: 1 DJO	REVISION DATE: 10-09-07	TSG 002636
DRAWN: SA/SAW	ORIGIN DATE: 5/24/07	PAGE: 1 of 1

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Specifications

POST DESCRIPTION

The lighting post shall consist of an aluminum shaft and a lower decorative base. The shaft profile will consist of 4 mounting tracks and internal passages as shown.

MATERIALS

The base shall be heavy wall, cast aluminum produced from certified ASTM 356.1 ingot per ASTM B-179-95a or ASTM B26-95. The shaft shall be extruded from aluminum, ASTM 6061 alloy, heat treated to a T6 temper. All hardware shall be tamper resistant stainless steel. Anchor bolts to be completely hot dip galvanized.

FINISH

Finish to be powder coat Holophane Black

DIMENSIONS

The post shall be 14' in height. A hand hole shall be provided for access.

INSTALLATION

The post shall be provided with four, hot dip galvanized L-type anchor bolts to be installed on a 12" diameter bolt circle. A door shall be provided in the base for anchorage and wiring access. A grounding screw shall be provided inside the base opposite the door.

WIND LOADING

Post assembly meets the requirements for 70 MPH 1.3 gust per AASHTO 1994 .

Luminaire

The Utility Arlington is designed for ease of maintenance with the plug-in electrical module common to each of the luminaires in Holophane's Utility Luminaire Series. A precision optical system maximizes post spacings while maintaining uniform illumination.

PATENT PENDING

Catalog #: SL5CH161400D1P3-SPCL-
ARU15AHPMABG3 H LEADS25FT10GAP-
AB-31-4

Customer Approval Signature

Date

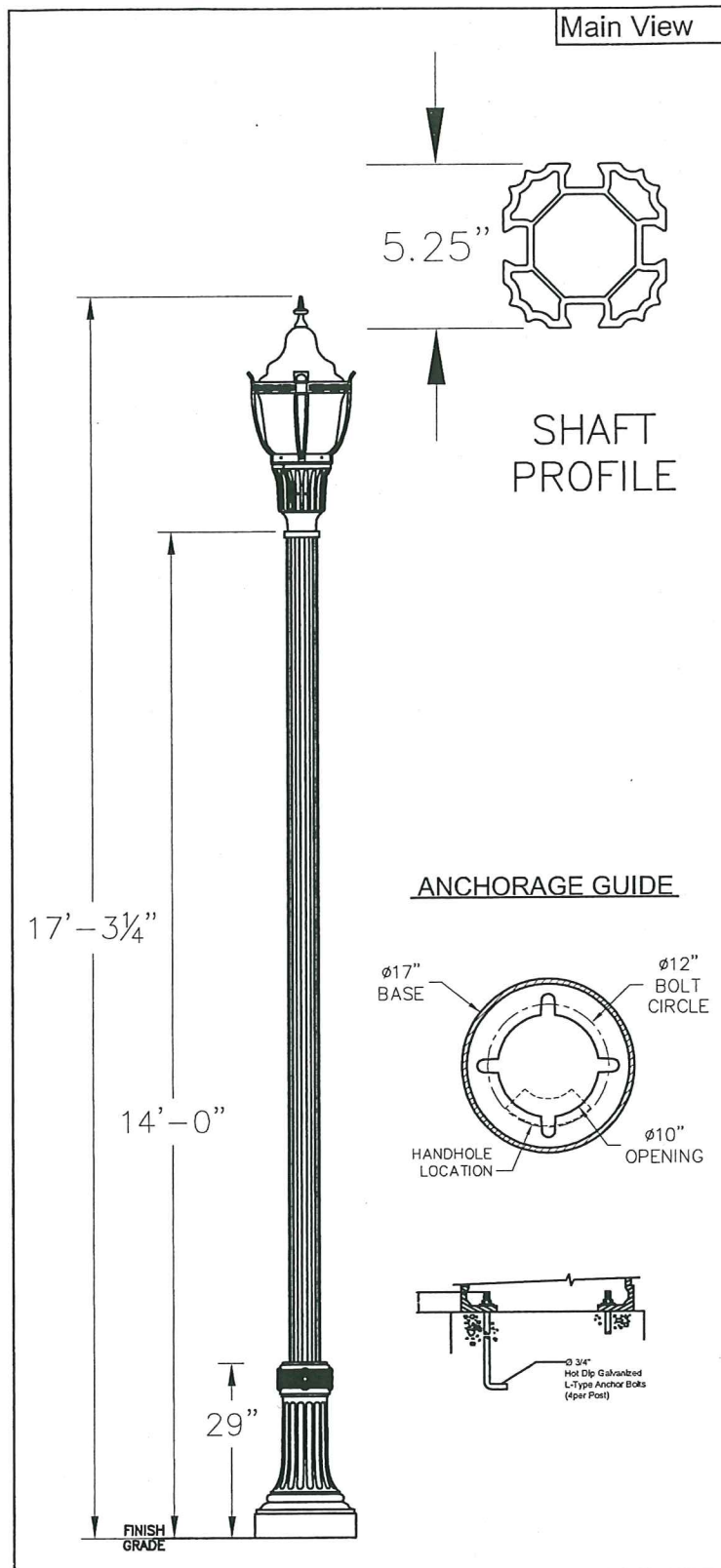


South Jordan Category 2

South Jordan, Utah

ORDER #:	TYPE: SL5	DRAWING #:
REVISION: 1	REVISION DATE: 10/5/07	TSG003175
DRAWN: SAW	ORIGIN DATE: 10/5/07	PAGE: 1

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Specifications

POST DESCRIPTION

The lighting post shall consist of an aluminum shaft and a lower decorative base. The shaft profile will consist of 4 mounting tracks and internal passages as shown.

MATERIALS

The base shall be heavy wall, cast aluminum produced from certified ASTM 356.1 ingot per ASTM B-179-95a or ASTM B26-95. The shaft shall be extruded from aluminum, ASTM 6061 alloy, heat treated to a T6 temper. All hardware shall be tamper resistant stainless steel. Anchor bolts to be completely hot dip galvanized.

FINISH

Finish to be powder coat Holophane black paint

DIMENSIONS

The post shall be 14' in height. A hand hole shall be provided for access.

INSTALLATION

The post shall be provided with four, hot dip galvanized L-type anchor bolts to be installed on a 12" diameter bolt circle. A door shall be provided in the base for anchorage and wiring access. A grounding screw shall be provided inside the base opposite the door.

WIND LOADING

Wind loading criteria to be supplied by customer.

Luminaire

The GranVille Premier is designed for ease of maintenance with the plug-in electrical module common to each of the luminaires in Holophane's Utility Luminaire Series. This unit also utilizes a latched, swing open door to allow relamping through the housing without the need to remove the glass assembly. The traditional acorn shaped luminaire, while reminiscent of the 1920's, contains a precision optical system that maximizes post spacings while maintaining uniform illumination.

PATENT PENDING

Catalog #: SL5NY171400D1P3-
GVP15HMAMB5RSGT LEADS25FT10GA-
AB-31-4

Customer Approval Signature

Date



South Jordan Category 3

South Jordan, Utah

ORDER #:	TYPE: SL5	DRAWING #:
REVISION: A	REVISION DATE: 10/8/07	AD40265
DRAWN: SAW	ORIGIN DATE: 10/5/07	PAGE: 1

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South Jordan City

Composite drawing showing
Luminaire and Pole

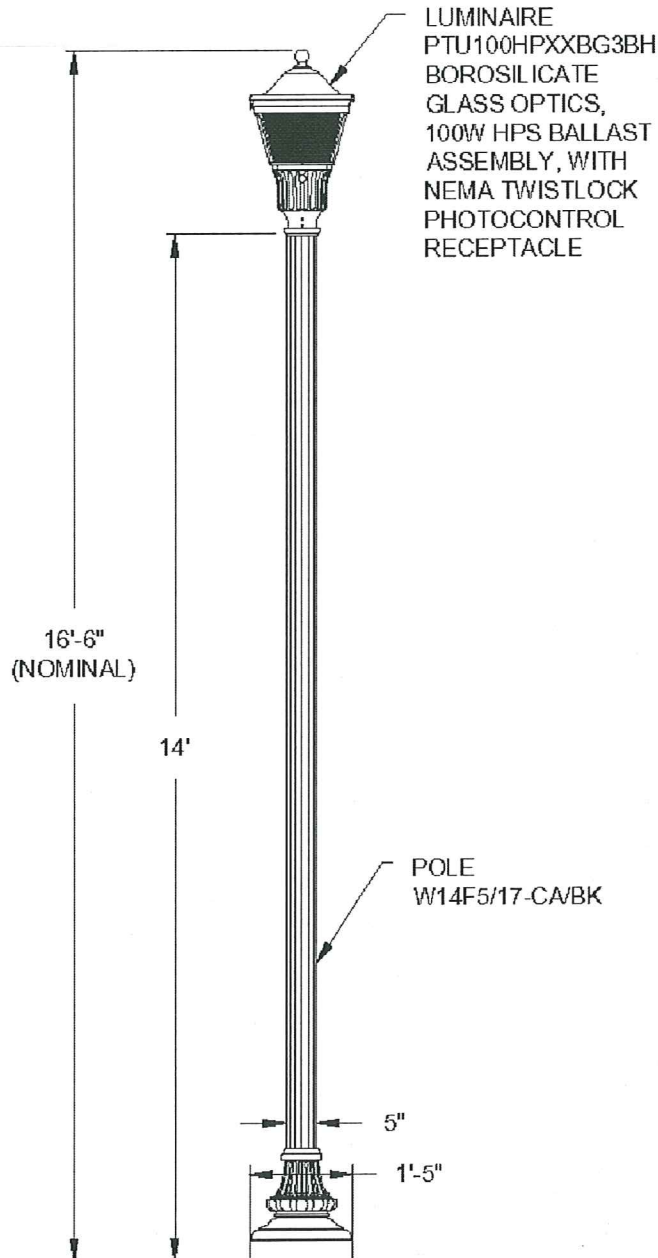
Specifications

LUMINAIRE DESCRIPTION

The Utility Post Top is designed for ease of maintenance with the plug-in electrical module common to each of the luminaires in Holophane's utility Luminaire Series. A precision optical system maximizes post spacings while maintaining uniform illumination. For complete specifications, see drawing US-2583.

POLE DESCRIPTION

The lighting post shall be all aluminum, one-piece construction, with a classic double-tapered and fluted base design. The shaft shall be 5" diameter fluted. The post shall be Holophane catalog number W14F5/17-CA/BK. For complete specifications, see drawing US-1639.



South Jordan Category 4

ARCHITECTURAL OUTDOOR ORDER #:

TYPE:

DRAWING NO: US-3246r1
PAGE 4 OF 4

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HOLOPHANE
LEADER IN LIGHTING SOLUTIONS

Holophane
A Division of National Service Industries, Inc.
214 OAKWOOD AVENUE - NEWARK, OHIO 43055

SCALE: N/A
DRAWN: RAF

DATE: 10-02-01